

FORM PTO-1390
(REV. 11-2000)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

1163-0385P

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

10/030689

INTERNATIONAL APPLICATION NO.

INTERNATIONAL FILING DATE

PRIORITY DATE CLAIMED

PCT/JP00/03731

June 8, 2000

NONE

TITLE OF INVENTION

NAVIGATION DEVICE

APPLICANT(S) FOR DO/EO/US

ASAHARA, Tomoyuki and UENO, Kiyoko

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39 (1).
4. ☐ The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☒ has been transmitted by the International Bureau. WO 01/94886 A1
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a. ☒ is transmitted herewith.
 - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4)
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)).
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 20. below concern document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98, Form PTO-1449(s), and International Search Report (PCT/ISA/210) with 6 document(s).
12. ☒ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A **FIRST** preliminary amendment.
14. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
15. ☐ A substitute specification.
16. ☐ A change of power of attorney and/or address letter.
17. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821-1.825.
18. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
19. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
20. ☒ Other items or information:
 - 1.) Form PCT/IB/308
 - 3.) Five (5) Sheets of Formal Drawings

U.S. APPLICATION NO. (if known, see 37 CFR 1.5) <div style="font-size: 1.5em; font-weight: bold; text-align: center;">NEW</div> <div style="font-size: 1.5em; font-weight: bold; text-align: center;">10/090689</div>	INTERNATIONAL APPLICATION NO. <div style="font-weight: bold; text-align: center;">PCT/JP00/03731</div>	ATTORNEYS DOCKET NUMBER <div style="font-weight: bold; text-align: center;">1163-0385P</div>
--	---	---

21. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5)): Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO. \$1,040.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO. \$890.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO. \$740.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4). \$710.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4). \$100.00 <div style="text-align: center; font-weight: bold; font-size: 1.2em;">ENTER APPROPRIATE BASIC FEE AMOUNT =</div> Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)). <table border="1" style="width:100%; border-collapse: collapse; font-size: 0.9em;"> <tr> <th style="width:20%;">CLAIMS</th> <th style="width:20%;">NUMBER FILED</th> <th style="width:20%;">NUMBER EXTRA</th> <th style="width:20%;">RATE</th> <th style="width:20%;"></th> <th style="width:20%;"></th> </tr> <tr> <td>Total Claims</td> <td>6 - 20 =</td> <td>0</td> <td>X \$18.00</td> <td>\$</td> <td>0.00</td> </tr> <tr> <td>Independent Claims</td> <td>1 - 3 =</td> <td>0</td> <td>X \$84.00</td> <td>\$</td> <td>0.00</td> </tr> <tr> <td colspan="3">MULTIPLE DEPENDENT CLAIM(S) (if applicable)</td> <td>NONE</td> <td>+ \$280.00</td> <td>\$ 0.00</td> </tr> <tr> <td colspan="5" style="text-align: right;">TOTAL OF ABOVE CALCULATIONS =</td> <td>\$ 890.00</td> </tr> <tr> <td colspan="5"> <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2. </td> <td>\$ 0.00</td> </tr> <tr> <td colspan="5" style="text-align: right;">SUBTOTAL =</td> <td>\$ 890.00</td> </tr> <tr> <td colspan="5">Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).</td> <td>\$ 0.00</td> </tr> <tr> <td colspan="5" style="text-align: right;">TOTAL NATIONAL FEE =</td> <td>\$ 890.00</td> </tr> <tr> <td colspan="5">Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +</td> <td>\$ 40.00</td> </tr> <tr> <td colspan="5" style="text-align: right;">TOTAL FEES ENCLOSED =</td> <td>\$ 930.00</td> </tr> <tr> <td colspan="5"></td> <td>Amount to be refunded \$</td> </tr> <tr> <td colspan="5"></td> <td>charged \$</td> </tr> </table>	CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE			Total Claims	6 - 20 =	0	X \$18.00	\$	0.00	Independent Claims	1 - 3 =	0	X \$84.00	\$	0.00	MULTIPLE DEPENDENT CLAIM(S) (if applicable)			NONE	+ \$280.00	\$ 0.00	TOTAL OF ABOVE CALCULATIONS =					\$ 890.00	<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.					\$ 0.00	SUBTOTAL =					\$ 890.00	Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).					\$ 0.00	TOTAL NATIONAL FEE =					\$ 890.00	Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +					\$ 40.00	TOTAL FEES ENCLOSED =					\$ 930.00						Amount to be refunded \$						charged \$	CALCULATIONS PTO USE ONLY
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE																																																																												
Total Claims	6 - 20 =	0	X \$18.00	\$	0.00																																																																										
Independent Claims	1 - 3 =	0	X \$84.00	\$	0.00																																																																										
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			NONE	+ \$280.00	\$ 0.00																																																																										
TOTAL OF ABOVE CALCULATIONS =					\$ 890.00																																																																										
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.					\$ 0.00																																																																										
SUBTOTAL =					\$ 890.00																																																																										
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).					\$ 0.00																																																																										
TOTAL NATIONAL FEE =					\$ 890.00																																																																										
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +					\$ 40.00																																																																										
TOTAL FEES ENCLOSED =					\$ 930.00																																																																										
					Amount to be refunded \$																																																																										
					charged \$																																																																										

a. ☒ A check in the amount of \$ **930.00** to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account. No. _____ in the amount of \$ _____ to cover the above fees.
A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-2448.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

Send all correspondence to:
Birch, Stewart, Kolasch & Birch, LLP or Customer No. 2292
P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

Date: January 14, 2002 _____

By **Michael K. Mutter, #29,680**

PATENT
1163-0385P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: ASAHARA, Tomoyuki et al.
Int'l. Appl. No.: PCT/JP00/03731
Appl. No.: New Group:
Filed: January 14, 2002 Examiner:
For: NAVIGATION DEVICE

PRELIMINARY AMENDMENT

BOX PATENT APPLICATION

Assistant Commissioner for Patents
Washington, DC 20231

January 14, 2002

Sir:

The following Preliminary Amendments and Remarks are respectfully submitted in connection with the above-identified application.

AMENDMENTS

IN THE SPECIFICATION:

Please amend the specification as follows:

Before line 1, insert --This application is the national phase under 35 U.S.C. § 371 of PCT International Application No. PCT/JP00/03731 which has an International filing date of June 8, 2000 which designated the United States of America.--

REMARKS

The specification has been amended to provide a cross-reference to the previously filed International Application.

Entry of the above amendments is earnestly solicited. An early and favorable first action on the merits is earnestly solicited.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By

Michael R. Mutter, #29,680

MKM/rem
1163-0385P

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

5/p_{rl}

SPECIFICATION

Navigation Device

TECHNICAL FIELD

The present invention relates to a navigation device which searches a route to a destination.

BACKGROUND ART

When a destination is set, a navigation device searches an optimal route from a current position to the destination and performs guiding to the destination by indicating the route.

In order to assist in understanding the route to the destination, the navigation device has the function of listing guide points (for example, intersections on the route) and displaying the direction of traffic at those guide points for example.

However, it is sometimes the case that a user wishes to bypass a certain guide point for some reason. For this purpose, the navigation device has the function of re-searching the route to bypass the guide point when the user sets a guide point to be bypassed.

For example, when there are ten guide points and a section from the third to the seventh of these guide points undergoes chronic traffic congestion, the route is re-searched in order to bypass the fourth, fifth and sixth guide points if those guide points are respectively designated as guide points to be bypassed.

Since the conventional navigation device is constituted as above, the route is re-searched in order to bypass guide points when a user designates the guide points which should be bypassed. However, the problem arises that a cumbersome operation must be performed in order to designate a plurality of guide points individually when it is desired to bypass a section across the plurality of guide points.

The present invention is proposed to solve the above problem and has the object of providing a navigation device which can search a route to bypass a section connecting arbitrary guide points without performing a cumbersome setting operation.

DISCLOSURE OF THE INVENTION

A navigation device according to the present invention receives a bypass setting for a section connecting arbitrary guide points and re-searches a route to a destination in accordance with the result of the setting.

In this manner, the advantageous effect is obtained that it is possible to search a route which bypasses the section connecting the arbitrary guide points without performing a cumbersome setting operation.

The navigation device according to the present invention may be adapted to receive a bypass setting for arbitrary guide points.

In this manner, the advantageous effect is obtained that it is possible to search a route which avoids the arbitrary guide points.

The navigation device according to the present invention may be provided with a storage means for storing the bypass settings received by a receiving means. When a route searching means searches a route to the destination, reference is made to the bypass settings stored in the storage means.

In this manner, the advantageous effect is obtained that a single bypass setting makes it possible to search a route which bypasses the section connecting the arbitrary guide points without performing the bypass setting on subsequent occasions.

The navigation device according to the present invention may be adapted to indicate the bypass settings stored in the storage means and to receive a modification to the bypass settings.

In this manner, the advantageous effect is obtained that it is possible to modify the status of the bypass in response to the condition.

The navigation device according to the present invention may be adapted to indicate the bypass settings stored in the storage means before the route searching means searches a route to a destination.

In this manner, the advantageous effect is obtained that it is possible to confirm bypass conditions before searching the route to the destination.

The navigation device according to the present invention may be adapted so that the storage means adds the date and time of the bypass to the bypass setting and stores it.

In this manner, the advantageous effect is obtained that it is

possible to indicate the status of the bypass considering the date and time of previous bypass settings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 shows a navigation device according to a first embodiment of the present invention.

Fig. 2 describes an example of displaying a listing of guide points.

Fig. 3 shows a navigation device according to a fourth embodiment of the present invention.

Fig. 4 shows a navigation device according to a fifth embodiment of the present invention.

Fig. 5 describes the details of bypass settings.

Fig. 6 describes the details of bypass settings.

BEST MODE OF CARRYING OUT THE INVENTION

In order to describe the invention in greater detail, the preferred embodiments will be outlined below with reference to the accompanying figures.

Embodiment 1

Fig. 1 shows a navigation device according to a first embodiment of the present invention. In the figure, reference numeral 1 denotes an operation key which is operated when a user set a destination or the like. 2 is a map database which stores map data. 3 is a route searching section which searches an optimal route to a destination referring to the map database 2 when the destination is set using the operation key 1. A route searching means is constituted by the map database 2 and the route searching section 3.

4 is a list-display section which lists guide points on the route searched by the route searching section 3 and displays the guide points on a display 5. 5 is a display on which a list of the guide points are displayed. A list display means is constituted by the list-display section 4 and the display 5.

6 is a bypass setting receiving section (receiving means) which receives a bypass setting for a section connecting two guide points or an arbitrary guide point. The bypass setting receiving section 6 outputs a

command for re-searching of the route to the destination to the route searching section 3 on receiving the bypass setting.

Next, the operation of the navigation device according to the first embodiment will be described below.

Firstly, when a user sets a destination using the operation key 1, the route searching section 3 searches an optimal route to the destination referring to the map database 2.

In this manner, a guide map showing the route to the destination is displayed on the display 5. In order to assist in understanding the route to the destination, the list-display section 4 lists the guide points on the route searched by the route searching section 3 (for example, intersections on the route) and displays such guide points on the display 5.

Fig. 2 describes an example of displaying a list of guide points. In this example, five guide points are displayed, the distance to the guide points and the direction of traffic at the guide points are also displayed.

However, when a user desires to bypass passing through a section connecting arbitrary guide points for some reason, it is possible for a user to request re-searching of the route by performing a bypass setting with the operation key 1.

For example, when it is desired to bypass the section connecting the first to the fifth guide points, the first guide point and the fifth guide point are designated with the operation key 1 as shown in Fig. 2, and the bypass setting receiving section 6 receives a bypass setting with respect to the section connecting the first to fifth guide points. As a result of receiving the bypass setting, the bypass setting receiving section 6 outputs the result of setting to the route searching section 3 and commands the route searching section 3 to re-search the route to the destination.

It is noted that when it is desired to bypass a section across a plurality of guide points in the conventional navigation device described above, it is necessary to perform a bypass setting on the second guide point, the third guide point and the fourth guide point as a result of the fact that the plurality of guide points must be designated individually.

As a result, the route searching section 3 searches a route which does not contain the section connecting the first to the fifth guide points, and displays a guide map showing that route on the display 5. Furthermore, in the same manner as the above, the list-display section 4

lists the guide points on the route searched by the route searching section 3 and displays those guide points on the display 5.

As clearly shown by the foregoing description, in the first embodiment, when a bypass setting on a section connecting arbitrary guide points is received by the bypass setting receiving section 6, the route searching section 3 re-searches a route to a destination in accordance with the setting. Thus, the advantageous effect is obtained that even when it is desired to bypass a section across a plurality of guide points, it is possible to search a route bypassing the section connecting arbitrary guide points without designating the plurality of guide points individually.

Embodiment 2

In the first embodiment described above, a bypass setting for a single section is received. However, the navigation device may be adapted to receive a bypass setting for a plurality of sections, the same advantageous effect as the first embodiment is also obtained in such a case.

However, when receiving the bypass setting for a plurality of sections, it is required to confirm whether the designated portion is the front of the section or the rear of the section. Therefore, for example, a key "A" in the operation key 1 is used as a key to allocate the front of the section and a key "B" in the operation key 1 is used as a key to allocate the rear of the section.

Embodiment 3

In the first embodiment described above, a bypass setting for an arbitrary section is received. However, the navigation device may be adapted such that the bypass setting receiving section 6 receives a bypass setting for an arbitrary guide point.

That is to say, a mode for receiving a bypass setting for an arbitrary section and a mode for receiving a bypass setting for an arbitrary guide point are prepared, a user can select an arbitrary mode in order to perform a bypass setting on the arbitrary section or a bypass setting on the arbitrary guide point.

In this manner, the advantageous effect is obtained that it is also possible to search a route which bypass the arbitrary guide point.

Embodiment 4

Fig. 3 shows a navigation device according to a fourth embodiment of the present invention. In the figure, components which are the same as or similar to those described with reference to Fig. 1 are designated by the same reference numerals and additional description is omitted.

Reference numeral 7 denotes a bypass setting storage section (storage means) which stores bypass settings received by the bypass setting receiving section 6.

Next, the operation of the navigation device according to the fourth embodiment will be described below.

In the first to third embodiments, when a user uses the operation key 1 to set a destination, the route searching section 3 searches an optimal route to the destination referring to the map database 2. On the other hand, in the fourth embodiment, the navigation device is adapted such that the bypass setting storage section 7 stores previous bypass settings received by the bypass setting receiving section 6. Thus, when the route searching section 3 searches a route to the destination, the route can be searched referring to the previous bypass settings stored in the bypass setting storage section 7.

In this manner, the advantageous effect is obtained that once a bypass setting is performed, it is possible to search a route bypassing an arbitrary guide point or a section connecting arbitrary guide points without subsequent bypass settings.

Embodiment 5

Fig. 4 shows a navigation device according to a fifth embodiment of the present invention. In the figure, components which are the same as or similar to those described with reference to Fig. 3 are designated by the same reference numerals and additional description is omitted.

Reference numeral 8 denotes a bypass setting modification section (modification means) which displays bypass settings stored in the bypass setting storage section 7 on the display 5 and which receives modifications to the bypass settings.

Next, the operation of the navigation device according to the fifth embodiment will be described below.

In the fourth embodiment described above, the bypass setting

storage section 7 stores previous bypass settings received by the bypass setting receiving section 6, and the route searching section 3 refers to the previous bypass settings stored in the bypass setting storage section 7 when searching a route to the destination. On the other hand, in this fifth embodiment, the bypass settings stored in the bypass setting storage section 7 are displayed on the display before the route searching means 3 searches the route to the destination (refer to Fig. 5), and modifications to the bypass settings are received by the bypass setting modification section 8.

In this manner, the advantageous effect is obtained that it is possible to confirm a bypass condition before searching the route to the destination. Furthermore, since it is possible to modify the bypass setting by merely selecting "perform" or "non-performance" of the bypass, the advantageous effect is obtained that it is possible to modify the status of the bypass in a simple manner. That is to say, since it is possible to modify the status of the bypass without a resetting or deletion operation on the bypass setting, it is possible to simply modify the set details of the bypass in accordance with the current condition.

Embodiment 6

In the fourth and fifth embodiments described above, the bypass setting storage section 7 stores previous bypass settings received by the bypass setting receiving section 6. However, as shown in Fig. 6, the bypass setting storage section 7 may add a bypass date and time to the bypass setting.

In this manner, the advantageous effect is obtained that it is possible to set the status of the bypass considering the date and time of previous bypass settings. That is to say, even in the event of section which experiences chronic traffic congestion, since congestion in such a section depends on the time of day, it is possible to set the status of the bypass in extreme detail considering the date and time of the previous bypass settings.

INDUSTRIAL APPLICABILITY

As shown above, a navigation device according to the present invention is adapted to re-search a route to a destination upon receipt of the bypass setting for geographical points when it is desired to bypass certain

geographical points. This may be the case for example when there are points of high traffic congestion on the route to the destination.

11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
1030
1031
1032
1033
1034
1035
1036
1037
1038
1039
1040
1041
1042
1043
1044
1045
1046
1047
1048
1049
1050
1051
1052
1053
1054
1055
1056
1057
1058
1059
1060
1061
1062
1063
1064
1065
1066
1067
1068
1069
1070
1071
1072
1073
1074
1075
1076
1077
1078
1079
1080
1081
1082
1083
1084
1085
1086
1087
1088
1089
1090
1091
1092
1093
1094
1095
1096
1097
1098
1099
1100
1101
1102
1103
1104
1105
1106
1107
1108
1109
1110
1111
1112
1113
1114
1115
1116
1117
1118
1119
1120
1121
1122
1123
1124
1125
1126
1127
1128
1129
1130
1131
1132
1133
1134
1135
1136
1137
1138
1139
1140
1141
1142
1143
1144
1145
1146
1147
1148
1149
1150
1151
1152
1153
1154
1155
1156
1157
1158
1159
1160
1161
1162
1163
1164
1165
1166
1167
1168
1169
1170
1171
1172
1173
1174
1175
1176
1177
1178
1179
1180
1181
1182
1183
1184
1185
1186
1187
1188
1189
1190
1191
1192
1193
1194
1195
1196
1197
1198
1199
1200
1201
1202
1203
1204
1205
1206
1207
1208
1209
1210
1211
1212
1213
1214
1215
1216
1217
1218
1219
1220
1221
1222
1223
1224
1225
1226
1227
1228
1229
1230
1231
1232
1233
1234
1235
1236
1237
1238
1239
1240
1241
1242
1243
1244
1245
1246
1247
1248
1249
1250
1251
1252
1253
1254
1255
1256
1257
1258
1259
1260
1261
1262
1263
1264
1265
1266
1267
1268
1269
1270
1271
1272
1273
1274
1275
1276
1277
1278
1279
1280
1281
1282
1283
1284
1285
1286
1287
1288
1289
1290
1291
1292
1293
1294
1295
1296
1297
1298
1299
1300
1301
1302
1303
1304
1305
1306
1307
1308
1309
1310
1311
1312
1313
1314
1315
1316
1317
1318
1319
1320
1321
1322
1323
1324
1325
1326
1327
1328
1329
1330
1331
1332
1333
1334
1335
1336
1337
1338
1339
1340
1341
1342
1343
1344
1345
1346
1347
1348
1349
1350
1351
1352
1353
1354
1355
1356
1357
1358
1359
1360
1361
1362
1363
1364
1365
1366
1367
1368
1369
1370
1371
1372
1373
1374
1375
1376
1377
1378
1379
1380
1381
1382
1383
1384
1385
1386
1387
1388
1389
1390
1391
1392
1393
1394
1395
1396
1397
1398
1399
1400
1401
1402
1403
1404
1405
1406
1407
1408
1409
1410
1411
1412
1413
1414
1415
1416
1417
1418
1419
1420
1421
1422
1423
1424
1425
1426
1427
1428
1429
1430
1431
1432
1433
1434
1435
1436
1437
1438
1439
1440
1441
1442
1443
1444
1445
1446
1447
1448
1449
1450
1451
1452
1453
1454
1455
1456
1457
1458
1459
1460
1461
1462
1463
1464
1465
1466
1467
1468
1469
1470
1471
1472
1473
1474
1475
1476
1477
1478
1479
1480
1481
1482
1483
1484
1485
1486
1487
1488
1489
1490
1491
1492
1493
1494
1495
1496
1497
1498
1499
1500
1501
1502
1503
1504
1505
1506
1507
1508
1509
1510
1511
1512
1513
1514
1515
1516
1517
1518
1519
1520
1521
1522
1523
1524
1525
1526
1527
1528
1529
1530
1531
1532
1533
1534
1535
1536
1537
1538
1539
1540
1541
1542
1543
1544
1545
1546
1547
1548
1549
1550
1551
1552
1553
1554
1555
1556
1557
1558
1559
1560
1561
1562
1563
1564
1565
1566
1567
1568
1569
1570
1571
1572
1573
1574
1575
1576
1577
1578
1579
1580
1581
1582
1583
1584
1585
1586
1587
1588
1589
1590
1591
1592
1593
1594
1595
1596
1597
1598
1599
1600
1601
1602
1603
1604
1605
1606
1607
1608
1609
1610
1611
1612
1613
1614
1615
1616
1617
1618
1619
1620
1621
1622
1623
1624
1625
1626
1627
1628
1629
1630
1631
1632
1633
1634
1635
1636
1637
1638
1639
1640
1641
1642
1643
1644
1645
1646
1647
1648
1649
1650
1651
1652
1653
1654
1655
1656
1657
1658
1659
1660
1661
1662
1663
1664
1665
1666
1667
1668
1669
1670
1671
1672
1673
1674
1675
1676
1677
1678
1679
1680
1681
1682
1683
1684
1685
1686
1687
1688
1689
1690
1691
1692
1693
1694
1695
1696
1697
1698
1699
1700
1701
1702
1703
1704
1705
1706
1707
1708
1709
1710
1711
1712
1713
1714
1715
1716
1717
1718
1719
1720
1721
1722
1723
1724
1725
1726
1727
1728
1729
1730
1731
1732
1733
1734
1735
1736
1737
1738
1739
1740
1741
1742
1743
1744
1745
1746
1747
1748
1749
1750
1751
1752
1753
1754
1755
1756
1757
1758
1759
1760
1761
1762
1763
1764
1765
1766
1767
1768
1769
1770
1771
1772
1773
1774
1775
1776
1777
1778
1779
1780
1781
1782
1783
1784
1785
1786
1787
1788
1789
1790
1791
1792
1793
1794
1795
1796
1797
1798
1799
1800
1801
1802
1803
1804
1805
1806
1807
1808
1809
1810
1811
1812
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
1825
1826
1827
1828
1829
1830
1831
1832
1833
1834
1835
1836
1837
1838
1839
1840
1841
1842
1843
1844
1845
1846
1847
1848
1849
1850
1851
1852
1853
1854
1855
1856
1857
1858
1859
1860
1861
1862
1863
1864
1865
1866
1867
1868
1869
1870
1871
1872
1873
1874
1875
1876
1877
1878
1879
1880
1881
1882
1883
1884
1885
1886
1887
1888
1889
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
2051
2052
2053
2054
2055
2056
2057
2058
2059
2060
2061
2062
2063
2064
2065
2066
2067
2068
2069
2070
2071
2072
2073
2074
2075
2076
2077
2078
2079
2080
2081
2082
2083
2084
2085
2086
2087
2088
2089
2090
2091
2092
2093
2094
2095
2096
2097
2098
2099
2100
2101
2102
2103
2104
2105
2106
2107
2108
2109
2110
2111
2112
2113
2114
2115
2116
2117
2118
2119
2120
2121
2122
2123
2124
2125
2126
2127
2128
2129
2130
2131
2132
2133
2134
2135
2136
2137
2138
2139
2140
2141
2142
2143
2144
2145
2146
2147
2148
2149
2150
2151
2152
2153
2154
2155
2156
2157
2158
2159
2160
2161
2162
2163
2164
2165
2166
2167
2168
2169
2170
2171
2172
2173
2174
2175
2176
2177
2178
2179
2180
2181
2182
2183
2184
2185
2186
2187
2188
2189
2190
2191
2192
2193
2194
2195
2196
2197
2198
2199
2200
2201
2202
2203
2204
2205
2206
2207
2208
2209
2210
2211
2212
2213
2214
2215
2216
2217
2218
2219
2220
2221
2222
2223
2224
2225
2226
2227
2228
2229
2230
2231
2232
2233
2234
2235
2236
2237
2238
2239
2240

WHAT IS CLAIMED IS:

1. A navigation device having a route searching means which searches a route to a destination when the destination is set, and a list-display means which lists and displays guide points on the route searched by the route searching means, said navigation device comprising:

a receiving means which receives a bypass setting for a section connecting arbitrary guide points when the list-display means lists and displays the guide points on the route,

wherein when said receiving means receives the bypass setting for the section connecting the arbitrary guide points, said route searching means re-searches the route to the destination in accordance with the setting result.

2. The navigation device according to Claim 1, wherein said receiving means receives a bypass setting for an arbitrary guide point.

3. The navigation device according to Claim 1, wherein said navigation device further comprises a storage means which stores the bypass setting received by the receiving means, and wherein when said route searching means searches the route to the destination, said route searching means refers to the bypass settings stored in the storage means.

4. The navigation device according to Claim 3, further comprising a modification means which receives modifications on the bypass settings while indicating the bypass settings stored in the storage means.

5. The navigation device according to Claim 4, wherein said modification means indicates the bypass settings stored in the storage means before the route searching means searches the route to the destination.

6. The navigation device according to Claim 4, wherein said storage means stores the bypass setting to which a bypass time and date are added.

FIG.1

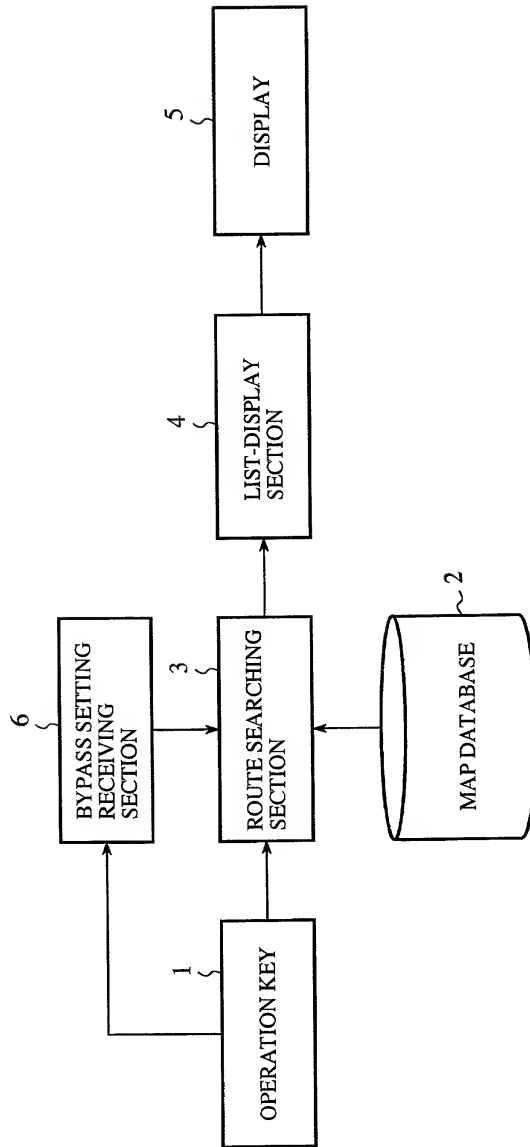


FIG.2

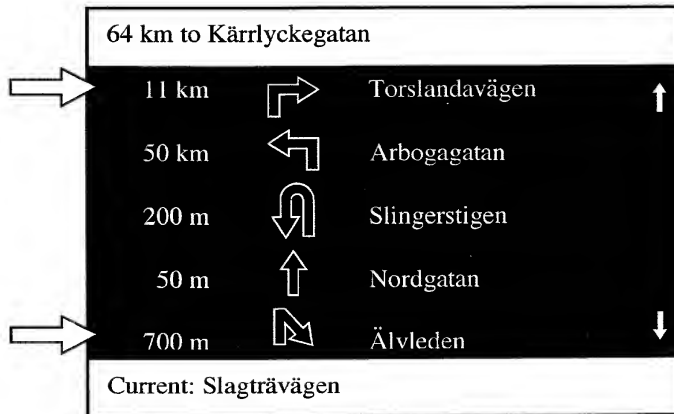


FIG.3

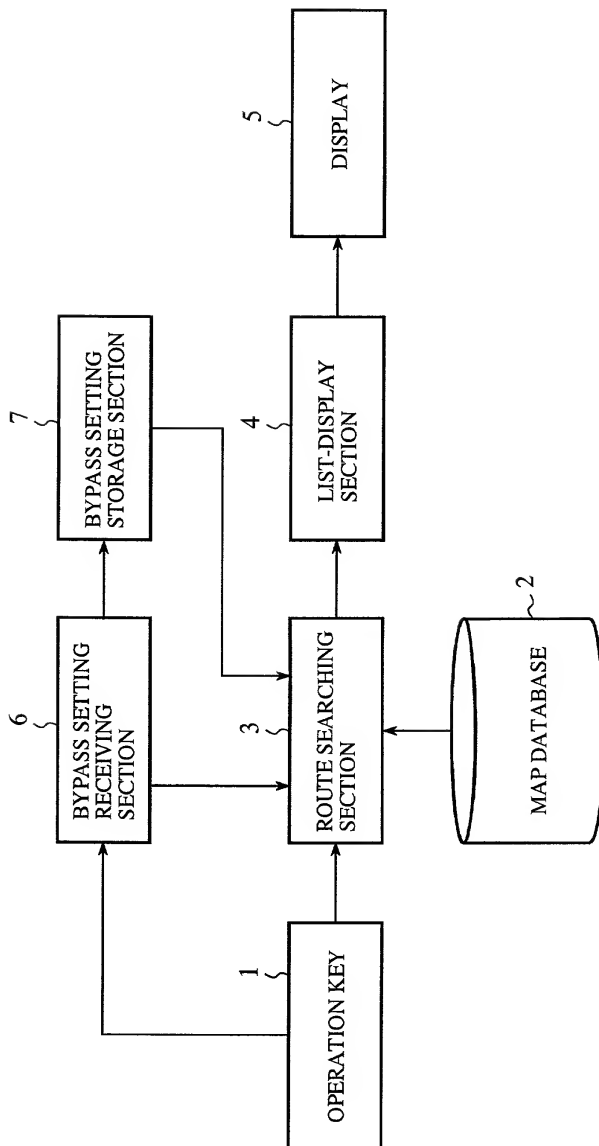


FIG.4

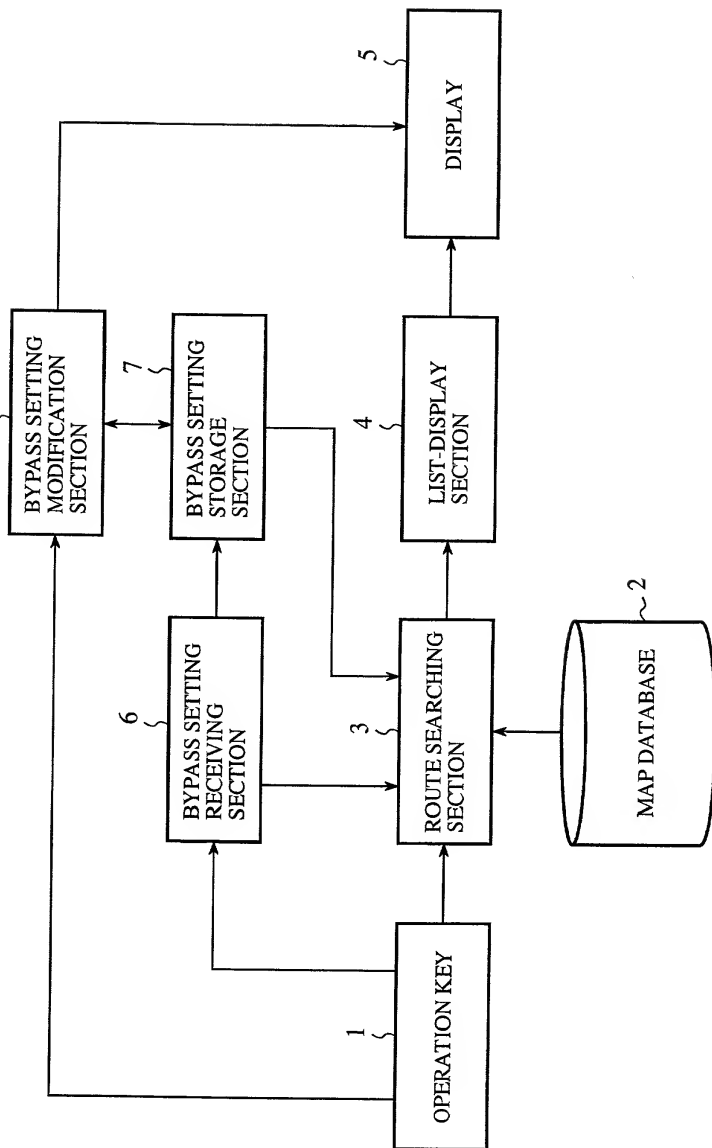


FIG.5

BYPASS PLACE NAME	BYPASS STATUS	
POINT A	PERFORM	NON-PERFORMANCE
SECTION B	PERFORM	NON-PERFORMANCE
POINT C	PERFORM	NON-PERFORMANCE

FIG.6

BYPASS PLACE NAME	BYPASS STATUS		BYPASS DATE/TIME	
POINT A	PERFORM	NON-PERFORMANCE	2000.3.1	8:23
SECTION B	PERFORM	NON-PERFORMANCE	2000.5.5	14:38
POINT C	PERFORM	NON-PERFORMANCE	2000.6.15	12:03

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Declaration and Power of Attorney For Patent Application

特許出願宣言書及び委任状

Japanese Language Declaration

日本語宣言書

下記の氏名の発明者として、私は以下の通り宣言します。

As a below named inventor, I hereby declare that:

私の住所、私書箱、国籍は下記の私の氏名の後に記載された通りです。

My residence, post office address and citizenship are as stated next to my name.

下記の名称の発明に関して請求範囲に記載され、特許出願している発明内容について、私が最初かつ唯一の発明者（下記の氏名が一つの場合）もしくは最初かつ共同発明者であると（下記の名称が複数の場合）信じています。

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

"NAVIGATION DEVICE"

上記発明の明細書（下記の欄でx印がついていない場合は、本書に添付）は、

the specification of which is attached hereto unless the following box is checked:

☐ 月 日 に提出され、米国出願番号または特許協定条約国際出願番号を _____ とし、
（該当する場合） _____ に訂正されました。☒ was filed on June 8, 2000
as United States Application Number or
PCT International Application Number
PCT/JP00/0373 and was amended on
_____ (if applicable).

私は、特許請求範囲を含む上記訂正後の明細書を検討し、内容を理解していることをここに表明します。

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

私は、連邦規則法典第37編第1条56項に定義されるとおり、特許資格の有無について重要な情報を開示する義務があることを認めます。

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Japanese Language Declaration

(日本語宣言書)

私は、米国法典第35編119条(a)-(d)項又は365条(b)項に基づき下記の、米国外の国の少なくとも一カ国を指定している特許協力条約365(a)項に基づき国際出願、又は外国での特許出願もしくは発明者証の出願についての外国優先権をここに主張するとともに、優先権を主張している、本出願の前に出願された特許または発明者証の外国出願を以下に、枠内をマークすることで、示しています。

Prior Foreign Application(s)

外国での先行出願

(Number) (番号)	(Country) (国名)

(Number) (番号)	(Country) (国名)

私は、第35編米国法典119条(e)項に基づいて下記の米国外特許出願規定に記載された権利をここに主張いたします。

(Application No.) (出願番号)	(Filing Date) (出願日)

私は、下記の米国法典第35編120条に基づいて下記の米国外特許出願に記載された権利、又は米国外を指定している特許協力条約365条(c)に基づき権利をここに主張します。また、本出願の各請求範囲の基が米国法典第35編112条第1項又は特許協力条約で規定された方法で先行する米国外特許出願に開示されていない限り、その先行米国外出願書提出日以降で本出願書の日本国内または特許協力条約国際提出日までの期間中に入手された、連邦規則法典第37編1条56項で定義された特許資格の有無に関する重要な情報について開示義務があることを認識しています。

(Application No.) (出願番号)	(Filing Date) (出願日)

(Application No.) (出願番号)	(Filing Date) (出願日)

私は、私自身の知識に基づいて本宣言書中で私が行なう表明が真実であり、かつ私の入手した情報と私の信じることに基づく表明が全て真実であると信じていること、さらに故意になされた虚偽の表明及びそれと同等の行為は米国法典第18編第1001条に基づき、罰金または拘禁、もしくはその両方により処罰されること、そしてそのような故意による虚偽の表明を行なえば、出願した、又は既に許可された特許の有効性が失われることを認識し、よってここに上記のごとく宣誓を致します。

I hereby claim foreign priority under Title 35, United States Code, Section 119 (a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Priority Not Claimed

優先権主張なし

(Day/Month/Year Filed) (出願年月日)

(Day/Month/Year Filed) (出願年月日)

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.

(Application No.) (出願番号)	(Filing Date) (出願日)

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of application.

(Status: Patented, Pending, Abandoned) (現況: 特許許可済、係属中、放棄済)

(Status: Patented, Pending, Abandoned) (現況: 特許許可済、係属中、放棄済)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Japanese Language Declaration (日本語宣言書)

委任状: 私は下記の発明者として、本出願に関する一切の手続きを米特許商標局に対して遂行する弁理士または代理人として、下記の者を指名いたします。(弁理士、または代理人の氏名及び登録番号を明記のこと)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (list name and registration number)

TERRELL C. BIRCH (Reg. No. 19,382)
 RAYMOND C. STEWART (Reg. No. 21,068)
 JOSEPH A. KOLASCH (Reg. No. 22,463)
 ANTHONY L. BIRCH (Reg. No. 26,122)

JAMES M. SLATTERY (Reg. No. 28,380)
 BERNARD L. SWEENEY (Reg. No. 26,448)
 MICHAEL K. MUTTER (Reg. No. 29,680)
 CHARLES GORENSTEIN (Reg. No. 29,721)

GERALD M. MURPHY (Reg. No. 28,927)
 LEONARD R. SVENSSON (Reg. No. 30,330)
 TERRY L. CLARK (Reg. No. 32,644)
 ANDREW D. MEIKLE (Reg. No. 32,868)

MARC S. WEINER (Reg. No. 32,181)
 ANDREW F. REISH (Reg. No. 33,440)
 JOE M. MUNCY (Reg. No. 32,334)
 C. JOSEPH FARACI (Reg. No. 32,350)

書類送付先

Send Correspondence to:

BIRCH, STEWART, KOLASCH & BIRCH, LLP
 P.O. BOX 747
 FALLS CHURCH, VA 22040-0747
 TEL: (703) 205-8000

直接電話連絡先: (名前及び電話番号)

Direct Telephone Calls to: (name and telephone number)

BIRCH, STEWART, KOLASCH & BIRCH, LLP
 TEL: (703) 205-8000

唯一または第一発明者名

Full name of sole or first inventor

Tomoyuki ASAHARA

発明者の署名

日付

Inventor's signature

Date

Tomoyuki Asahara

December 27, 2001

住所

Residence

Hyogo, Japan

国籍

Citizenship

Japanese

私書箱

Post Office Address c/o MITSUBISHI ELECTRIC
 CONTROL SOFTWARE CO., LTD.,

1-2, Hamayama-dori 6-chome, Hyogo-ku,
 Kobe-shi, Hyogo 652-0871 Japan

第二共同発明者

Full name of second joint inventor, if any

Kiyoko UENO

第二共同発明者

日付

Second inventor's signature

Date

Kiyoko Ueno

December 27, 2001

住所

Residence

Hyogo, Japan

国籍

Citizenship

Japanese

私書箱

Post Office Address c/o MITSUBISHI ELECTRIC
 CONTROL SOFTWARE CO., LTD.,

1-2, Hamayama-dori 6-chome, Hyogo-ku,
 Kobe-shi, Hyogo 652-0871 Japan

(第三以降の共同発明者についても同様に記載し、署名をすること)

(Supply similar information and signature for third and subsequent joint inventors.)

United States Patent & Trademark Office
Office of Initial Patent Examination -- Scanning Division



Application deficiencies found during scanning:

☐ Page(s) _____ of _____ were not present
for scanning. (Document title)

☐ Page(s) _____ of _____ were not present
for scanning. (Document title)

☐ *Scanned copy is best available. fig. 2 is dark.*